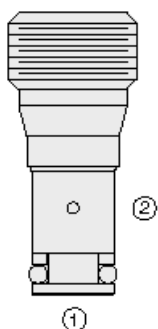




Overview



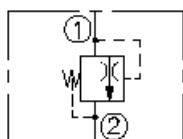
Description

TR04-B20 is a screw-in, cartridge style, direct acting, poppet type, hydraulic thermal relief valve intended to prevent cylinder damage resulting from temperature induced pressure intensification. This valve is not intended to be used as a relief valve or as protection against load induced pressure spikes.

Operation

The TR04-B20 blocks flow from port 1 to port 2 until sufficient pressure is present at port 1 to force the spring opposed poppet from its seat. Pressure at port 2 should not exceed 500 psi [34,5 bar] above the pressure at port 1. Pressure at port 2 is additive to pressure setting.

Symbol



Ratings

Pressure Ratings

Pressure rating	427 bar (6200 psi)
Proof pressure	620.7 bar (9000 psi)
Burst pressure	1241 bar (18000 psi)

Flow Ratings

Reseat characteristic	0.5 ml/min (10 drops/min)	- Note: Nominal 85% of crack pressure
Maximum internal leakage	0.15 ml/min (1 drops/min)	- Note: At 90% of nominal setting

Temperature Ratings

Operating fluid temperature	-40 to 100 °C (-40 to 212 °F)	- Note: With buna N seals
	-26 to 204 °C (-15 to 400 °F)	- Note: With fluorocarbon seals
	-54 to 107 °C (-65 to 225 °F)	- Note: With polyurethane seals
Storage temperature	-40 to 71 °C (-40 to 160 °F)	
Ambient temperature	-40 to 71 °C (-40 to 160 °F)	

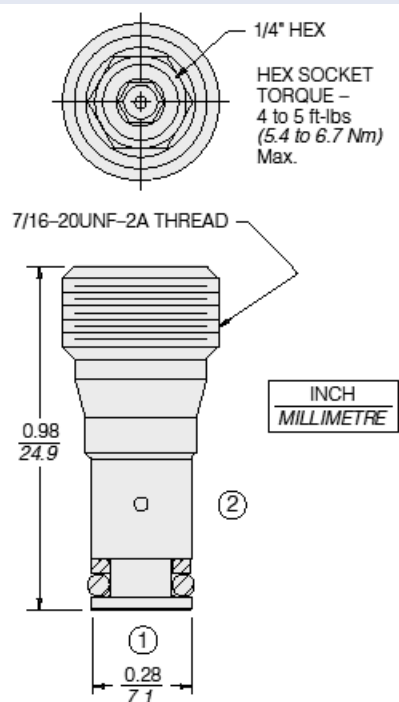
Operating Parameters

Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

Properties

Unit weight	0.09 kg (0.20 lb)
Internal wetted surface area	19 cm² (2.95 in²)

Dimensions



Installation Specifications

Cavity	VC04-B2
Cartridge installation torque	5.4 to 6.8 N-m (4 to 5 ft-lb)
Orientation restriction	None

Accessories

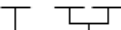
Seal kit	SK04-B2X-B SK04-B2X-M	- Note: X = seal option
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Order Code

TR04-B20 - 0 -

Non-standard spring settings are available for OEM applications. Consult factory.



Spring Setting

- 40** 276 to 286 bar (4000 to 4150 psi)
- 52** 359 to 369 bar (5200 to 5350 psi)
- 60** 414 to 424 bar (6000 to 6150 psi)

Seals

- N** Buna N (Standard for Spring Setting 40)
- V** Fluorocarbon (Optional for Spring Setting 40)
- P** Polyurethane (Standard for Spring Settings 52 and 60)

Model Options

TR04-B20-H-J-R/S

H Line Body

CODE	DESCRIPTION
0	No Body

J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
P	Polyurethane
U	PPDI Urethane

R Spring

CODE	DESCRIPTION
10	68.9 to 75.8 bar (1000 to 1100 psi) Spring Range
20	137.9 to 144.8 bar (2000 to 2100 psi) Spring Range
30	206.8 to 213.7 bar (3000 to 3100 psi) Spring Range
40	275.8 to 286.1 bar (4000 to 4150 psi) Spring Range
52	358.5 to 368.9 bar (5200 to 5350 psi) Spring Range
60	413.7 to 424 bar (6000 to 6150 psi) Spring Range

S Setting

CODE	DESCRIPTION
MXXX	Spring Setting in XXX bar
XX	Spring Setting in XX psi (x 100)